Index of Claims

| <b>Applica</b> | tion/Contro | l No. |
|----------------|-------------|-------|
|----------------|-------------|-------|

10/549,871

Date

Examiner

Mohammad Meah

Applicant(s)/Patent under Reexamination

KUNKEL ET AL.

Art Unit

1652

| √  | Rejected |
|----|----------|
| II | Allowed  |

|   | (Through numeral)<br>Cancelled |
|---|--------------------------------|
| ÷ | Restricted                     |

Claim

| N | Non-Elected  |
|---|--------------|
| _ | Interference |

| A | Appeal   |
|---|----------|
| 0 | Objected |

|              |  | ш  |  |  |  |  |              | - 1  |              |          |
|--------------|--|--|--|--|--|--|--------------|--|--------------|----------|
|              | •  | ·  |  |  |  |  | _            |  |              | $\neg$   |
| Cla          | ıım  |  |  |  | ᆜ  | ate  | <del>}</del> |  |              | _        |
|              | Original   |  |  |  |  |  |              |  |              |          |
| Final        | ji   |  |  |  |  |  |              |  |              |          |
| i 🗀          | Ţ  |  |  |  |  |  |              |  |              | - 1      |
|              | )  | U  |  |  |  |  |              |  |              |          |
|              | 1 ,  | N  |  |  |  |  |              |  |              |          |
|              | 2  |  |  |  |  |  |              | ,  |              |          |
|              | 1 ,<br>2 3 4 5 6 7   | T  |  |  |  | •  |              |  |              |          |
|              | 4  |  |  |  |  |  |              |  |              |          |
|              | 5  | T  |  |  |  |  |              |  |              |          |
|              | 6  |  |  |  |  |  |              |  |              |          |
| <del> </del> | 7  | 1  | _  |  |  |  |              |  |              | $\Box$   |
|              | .8   | -  |  |  |  |  |              |  |              |          |
|              | a  | Н  |  |  | -  | -  | _            | -  | -            | $\neg$   |
|              | 10   | Н  | $\vdash$   | Н  |  |  |              |  |              | $\dashv$ |
| <del> </del> | 11   | -  | -  | $\vdash$   | $\vdash$   | $\vdash$   |              |  | -            | $\dashv$ |
| $\vdash$     | 12   | +  |  | -  | $\vdash$   | $\vdash$   |              | Н  | Н            | $\dashv$ |
| <b>—</b>     | 12   | -  |  | $\vdash$   | H  |  |              | H  | Н            | $\dashv$ |
| <del></del>  | 14   | -  | $\vdash$   | $\vdash$   |  | -  |              |  |              | H        |
|              | 15   | -  | -  | _  | _  |  |              |  |              | $\dashv$ |
|              | 8<br>9<br>10<br>11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>21 | -  | $\vdash$   | _  |  |  |              |  | $\vdash$     | $\dashv$ |
|              | 10   | -  |  | -  |  | $\vdash$   | —            | $\vdash$   | <u> </u>     |          |
|              | 17   | 1  |  |  | -  | _  | _            | -  |              |          |
| <u> </u>     | 18   | Н  | _  |  |  |  | _            | _  |              |          |
| ļ            | 19   | 1  |  | _  |  | <u> </u>   | <u> </u>     |  |              | _        |
|              | 20   | Ц  |  | _  |  | _  |              |  |              |          |
|              | 21   | Ц  |  | _  |  |  |              |  |              | Щ        |
| <u> </u>     | 22<br>23<br>24   | Ш  |  | ļ  |  |  |              |  |              |          |
|              | 23   |  | ·  | L  | _  |  | _            |  |              |          |
| L            | 24   |  |  |  |  |  | _            |  |              |          |
|              | 25   | $\sqcup$   | _  | _  |  |  |              |  |              |          |
|              | 26<br>27   | $\perp$  |  |  |  |  | _            |  |              |          |
|              | 27   |  |  |  |  |  |              | L  |              |          |
|              | 28<br>29   | L  |  |  |  |  |              |  |              | -        |
|              | 29   | 1  |  |  | . !  |  |              | ·  |              |          |
|              | 30 =   | 人  |  |  |  | L  | L_           | $\Box$   |              |          |
|              | 31   |  |  |  |  |  |              |  |              |          |
|              | 32   |  |  |  |  | Ĺ  |              |  |              |          |
|              | 31<br>32<br>33   |  | Ι_   |  |  |  |              |  |              |          |
|              | 34   |  |  |  | -  | -  |              |  |              |          |
|              | 35   |  | Γ  |  |  |  |              |  |              |          |
|              | 36   | Γ  | T  |  |  |  |              |  | Г            | П        |
| 1.           | 36<br>37   |  | <del>                                     </del> |  |  |  |              |  |              | П        |
|              | 38   | $\vdash$   |  | $\vdash$   | $\vdash$   |  | _            |  | _            | П        |
|              | 39   | ✝  | <del>                                     </del> |  | <del>                                     </del> |  | _            | $\vdash$   | $\vdash$     | H        |
|              | 40   | $\vdash$   | $\vdash$   | _  | <del> </del>                                     | <del>                                     </del> | <u> </u>     | $\vdash$   | $\vdash$     | Н        |
|              | 41   | $\vdash$   | $\vdash$   | <del>                                     </del> | $\vdash$   |  |              | <del>                                     </del> | <u> </u>     | Н        |
|              | 42   | <del>                                     </del> | -  |  | $\vdash$   | <del> </del>                                     | $\vdash$     | $\vdash$   | $\vdash$     | $\vdash$ |
|              | 43   | $\vdash$   | $\vdash$   | -  | $\vdash$   | $\vdash$   |              |  | <del> </del> | Н        |
| -            | 44   | <del>                                     </del> | ├-   |  | ⊢  | -  |              | -  |              | Н        |
|              | 45   | ├  | <del></del>                                      | -  |  |  | -            | ├  | $\vdash$     | Н        |
| -            |  | ⊢  | -  | $\vdash$   | ⊢  | <del> </del>                                     | <del> </del> | ├  |              | $\vdash$ |
| <u></u>      | 46   | H  | ⊢  | <u> </u>   | ├  | ├  | -            |  |              | Н        |
|              | 47   | <u> </u>   |  | <u> </u>   |  | _  | <u> </u>     | <u> </u>   | $\vdash$     | Щ        |
|              | 48   | $\vdash$   |  | <u> </u>   | ldash  |  | <u> </u>     | ļ  | <u> </u>     | Щ        |
|              | 49   | <u> </u>   | _  | <b>!</b>   | L  | ļ  | <u> </u>     | <u> </u>   | <u> </u>     | Щ        |
| 1            | 50   | 1  | 1  | I -  | l  | l  | l            | l  | l            | 1        |

| iaiiii        |          |        |          |  | Jak  | <u></u>  |          |               | _  | 1 1 | Oic             | 43411    |  |   |  |          | <u> </u> | <u> </u> |  |          |               | ۱ |
|---------------|----------|--------|----------|--|--|----------|----------|---------------|--|-----|-----------------|----------|--|---|--|----------|----------|----------|--|----------|---------------|---|
| Original      | ,        |        |          |  |  |          |          |               |  |     | Final           | Original |  |   |  |          |          |          |  |          |               |   |
| 1             | X        | 1      | T        |  |  |          |          |               |  |     |                 | 51       |  |   |  |          |          |          |  |          |               | ĺ |
| 2             | 11       | 4      | †        | -  |  | _        |          |               |  |     |                 | 51<br>52 |  |   | $\neg$   | _        |          |          | $\overline{}$                                    |          |               | l |
| $\frac{1}{3}$ | 11       | T      | t        |  | -  |          | -        |               | _  |     |                 | 53       |  |   | П  |          |          |          |  |          |               | ĺ |
| + 4           | ╫        | ╁      | +        |  |  |          |          |               |  |     |                 | 54       |  |   |  |          | _        | $\vdash$ | $\vdash$   | $\vdash$ |               | ĺ |
| 3<br>4<br>5   | -        | ÷      | +        | _  | -  | _        |          |               |  |     |                 | 55       |  |   |  |          |          |          |  | $\Box$   |               | ĺ |
| 6             | -11      | +      | +        |  |  |          |          | -             |  |     |                 | 56       |  |   |  |          |          | -        |  | _        | _             | l |
| 7             | ++       | +-     | +        | -  |  |          |          | -             |  |     |                 | 57       |  |   |  |          | _        | $\vdash$ | -  |          |               | l |
| 8             | ╫        | +      | +        | $\vdash$   |  | _        |          | -             |  |     |                 | 58       | $\vdash$   |   |  |          | _        | -        |  |          |               | l |
| 1 6           | -11      | +-     | +        | ┢╾   | ┢  | -        | -        | -             | ┝  |     |                 | 59       |  |   |  |          |          | $\vdash$ |  |          |               | l |
| 9             | H        | +      | +        |  |  |          |          |               | $\vdash$   |     |                 | 60       | H  | _ |  |          | _        |          | $\vdash$   | $\Box$   | $\vdash$      | l |
| 11            | +        | +-     | $\vdash$ |  | $\vdash$   |          |          | $\vdash$      | -  |     |                 | 61       |  |   |  |          |          |          |  | П        | $\vdash$      | ١ |
| 12            | - 11     | ┿      | +-       | $\vdash$   | $\vdash$   |          | Н        | ┢             |  |     |                 | 62       |  |   |  |          |          | <u> </u> |  |          | $\overline{}$ | ١ |
| 12            |          | ┼┈     | ╁        |  |  |          | H        | Η,            | ┝  |     |                 | 63       |  |   |  |          | _        |          |  |          | Г             | l |
| 14            | -        | +      | 1        | -  | -  |          | -        |               |  |     |                 | 64       |  |   |  |          |          |          |  |          |               | 1 |
| 15            | -        | +      | +        | _  |  |          |          | -             | _  |     |                 | 65       | _  |   |  |          |          |          | $\vdash$   | $\Box$   |               | 1 |
| 15<br>16      | . 11     | ╁      | ╁        | <del>                                     </del> | <del>                                     </del> |          | $\vdash$ | $\vdash$      |  |     |                 | 66       |  |   |  |          |          | $\vdash$ | $\vdash$   | Г        |               | 1 |
| 17            | -++      | +-     | -        | <del>                                     </del> |  | -        |          | $\vdash$      |  |     | <del></del>     | 67       |  |   |  |          |          |          |  |          |               | ١ |
| 18            | 11       | +-     | +        | $\vdash$   |  | $\vdash$ |          | -             | -  | 1   |                 | 68       | $\vdash$   |   |  |          | -        | $\vdash$ |  |          |               | 1 |
| 19            | Н        | +      | +-       | ┢  |  |          |          |               |  | 1   |                 | 69       | <u> </u>   |   |  |          | _        | $\vdash$ |  |          |               | 1 |
| 20            |          | -      | +        |  | $\vdash$   | _        |          |               | _  | 1   |                 | 70       |  |   |  | $\vdash$ | $\vdash$ | $\vdash$ |  |          |               | 1 |
| 21            | +        | 1      | +        | $\vdash$   |  | -        |          | <del></del>   | $\vdash$   | 1   | $\vdash \vdash$ | 71       | 一  | - |  | $\vdash$ | _        | _        | _  |          | Г             | 1 |
| 22            | ,        | 1      | +        |  | H  |          |          |               | $\vdash$   | 1   |                 | 72       | <del> </del>                                     |   |  | $\vdash$ | $\vdash$ | _        | -  |          |               | 1 |
| 23            | 1        | 1      | +        | <del>                                     </del> | H  |          | $\vdash$ |               | <del> </del>                                     | 1   |                 | 73       | T  |   |  | $\vdash$ |          |          |  |          |               | 1 |
| 24            | $\vdash$ | 1      | +        | 一  | ┢  |          |          |               |  | 1   |                 | 74       | ┪  | _ | <del>                                     </del> | $\vdash$ |          |          |  |          |               | 1 |
| 25            |          | 1      | +        | H  | $\vdash$   | _        | -        |               | <del>                                     </del> | 1   |                 | 75       | 1  |   | Г  | $\vdash$ | $\vdash$ | $\vdash$ | _  |          |               | 1 |
| 26            |          | /-     | +-       | <del>                                     </del> |  |          |          | _             | $\vdash$   | 1   |                 | 76       |  |   | <del>                                     </del> |          | $\vdash$ |          | <u> </u>   | $\Box$   | Г             | 1 |
| 27            | - 1/     | +      | +        |  | _  | _        | _        |               | -  | 1   |                 | 77       | Т  |   |  |          |          |          | T  | $\vdash$ |               | 1 |
| 28            | 1        | +      | +-       | Т  |  |          | $\vdash$ |               | _  | 1   |                 | 78       |  |   |  |          | <b>!</b> |          |  |          |               | 1 |
| 29            | 1        |        | +-       |  |  |          |          |               | $\vdash$   | 1   |                 | 79       | $\vdash$   |   | Г  |          | -        |          | <del>                                     </del> |          |               | 1 |
| 30            | ١٠/٠     |        | 1        |  | <del>                                     </del> |          |          |               | <b>—</b>   | ١.  |                 | 80       |  |   | $\vdash$   | -        |          |          |  |          | Г             | 1 |
| 31            |          | +      | +-       |  |  |          |          |               |  | 1   |                 | 81       | Τ  |   |  | <b></b>  | _        |          | 1  |          | $\vdash$      | 1 |
| 32            |          | 1      | 1        |  |  | _        | <b>-</b> |               |  | 1   | $\vdash$        | 81<br>82 | <del>                                     </del> |   |  | Г        | -        | <b></b>  | <b></b>  |          | ·             | 1 |
| 33            |          | $\top$ | <b>†</b> | T  |  |          | _        |               |  | 1   |                 | 83       | 1  |   | Г  |          |          |          |  |          |               | 1 |
| 34            |          |        | 1        |  |  |          |          |               | $\vdash$   | 1   |                 | 84       | <u> </u>   |   |  | Г        | $\vdash$ | _        | _  |          |               | 1 |
| 34<br>35      |          | 1-     | †        |  |  |          | Г        |               |  | 1   |                 | 85       |  |   |  |          |          |          |  |          |               | 1 |
| 36            | 1        | 1      | $\top$   | Г  |  |          |          | $\vdash$      | Т  | 1   |                 | 86       |  |   |  |          |          |          |  |          |               | 1 |
| 37            | '        | 1      | 1        |  | Г  |          |          |               |  | 1   |                 | 87       | Г  |   |  |          |          | <b> </b> |  |          |               | 1 |
| 38            | 3        | $\top$ |          | T  |  | _        | _        | 1             |  | 1   |                 | 88       | Г  |   |  |          |          | Г        | Г  | Г        |               | 1 |
| 39            | 7        | 1      | 1        |  | 1  |          | $\vdash$ |               |  | 1   |                 | 89       | Π  | 1 |  |          |          |          |  |          |               | 1 |
| 40            |          | $\top$ | 1        | <b>†</b>   | $\vdash$   |          |          |               |  | 1   |                 | 90       |  |   |  |          |          |          |  |          |               | 1 |
| 41            | $\top$   | $\top$ | 1        | 厂  | <b> </b>   | _        |          |               |  | 1   |                 | 91       | Г  |   |  |          | Г        |          |  |          | Г             | 1 |
| 42            |          |        |          | T  |  |          |          |               |  | 1   |                 | 92       | T  |   |  |          | Г        |          |  | _        |               | 1 |
| 43            | 3        | T      |          | Π  | Г  | _        |          | $\overline{}$ |  | 1   |                 | 93       |  |   |  |          |          | _        |  |          |               | 1 |
| 44            |          | 1      |          |  | Γ  |          |          | Π             | П  | 1   |                 | 94       | Γ  |   |  |          | · ·      | Ĭ        |  |          |               | 1 |
| 45            |          | Τ      | 1        | 1  | T  |          | Π        | П             |  | 1   |                 | 95       |  |   | I  |          |          |          |  |          |               | 1 |
| 46            |          |        | 1        |  |  |          |          | <u> </u>      | Г  | 1   |                 | 96       |  |   |  |          |          |          |  |          |               | 1 |
| 47            | 7        | -      |          |  |  |          |          |               |  |     |                 | 97       |  |   |  |          |          |          | Ľ  |          |               | ] |
| 48            | 3        |        |          |  |  |          |          |               |  | ]   |                 | 98       |  |   |  |          |          |          |  |          |               | ] |
| 49            | 7        |        |          |  |  |          | $\Box$   |               |  | ]   |                 | 99       |  | Ľ |  |          |          |          | Ľ  |          |               | ] |
| 50            |          |        |          | Π  |  |          |          |               |  | ]   |                 | 100      |  |   |  |          |          |          |  | $\Gamma$ | $\Box$        | ] |
|               |          |        |          |  |  | _        | •        |               | •—   | -   |                 | *        |  | _ | _  | _        | _        | •        | •  |          |               | - |

|             |   | T Data   |          |              |              |          |          |          |  |                    |
|-------------|---|----------|----------|--------------|--------------|----------|----------|----------|--|--------------------|
| Uli         | aim   | _        |          |              |              | ate      | ;        |          |  |                    |
| Final       | Original  | :        |          |              |              |          |          |          |  |                    |
|             | 101   |          |          |              |              |          |          |          |  |                    |
|             | 101<br>102<br>103<br>104<br>105<br>106                                    |          |          |              |              |          |          |          |  |                    |
|             | 103   |          | _        |              |              |          |          |          |  |                    |
|             | 104   |          |          |              | _            |          |          |          |  | $\dashv$           |
|             | 105   |          |          |              | _            | -        | -        | $\dashv$ | _                                      | _                  |
|             | 107   | -        | -        | _            |              |          |          | $\dashv$ | -                                      | _                  |
|             | 108   |          |          |              |              |          |          | $\dashv$ | -                                      | _                  |
|             | 108<br>109<br>110   | $\vdash$ | $\neg$   |              |              |          |          |          |  | _                  |
|             | 110   | П        |          |              |              |          |          | $\Box$   |  |                    |
|             | 111<br>112<br>113<br>114<br>115<br>116<br>117                             |          |          |              |              |          |          |          |  |                    |
|             | 112   |          |          |              |              |          |          |          |  |                    |
|             | 113   |          |          |              |              |          |          |          |  | Ш                  |
|             | 114   | Ш        |          |              |              |          |          |          |  | $\dashv$           |
|             | 115   | Н        |          |              |              | -        |          | _        |  |                    |
|             | 110   |          |          |              |              |          |          |          | _                                      | $\dashv$           |
|             | 118   |          |          |              |              |          | -        | _        |  |                    |
|             | 119   |          |          |              | -            |          | _        |          |  |                    |
|             | 120   |          |          |              |              |          |          |          |  | $\dashv$           |
|             | 121   |          |          |              |              |          |          |          |  |                    |
|             | 122   |          |          |              |              |          |          |          |  |                    |
|             | 123   |          |          |              |              |          |          |          |  |                    |
|             | 124   |          |          | _            |              |          |          |          |  |                    |
|             | 125   | _        |          |              |              |          | _        |          |  |                    |
|             | 120   | H        | _        |              | _            | _        | -        |          |  |                    |
|             | 119<br>120<br>121<br>122<br>123<br>124<br>125<br>126<br>127<br>128<br>129 | ⊢        | _        |              |              |          | $\vdash$ |          |  | -                  |
|             | 129   |          | _        | -            |              |          |          |          |  | -                  |
|             | 130   | H        |          |              | -            |          | $\vdash$ |          |  | $\overline{\cdot}$ |
| <b></b>     | 130<br>131<br>132   |          |          |              |              |          |          |          | _                                      |                    |
|             | 132   |          |          |              |              |          |          |          |  |                    |
|             | 133<br>134  |          |          |              |              |          |          |          |  |                    |
|             | 134   | _        |          |              |              |          |          |          |  |                    |
|             | 135<br>136  |          | _        | _            | <u> </u>     |          | _        |          |  | $\blacksquare$     |
|             | 136   | _        | <u> </u> | <u> </u>     | <u> </u>     | _        |          |          | -                                      | -                  |
| <u> </u>    | 137   | $\vdash$ |          |              | <del> </del> |          | ┝        |          |  | H                  |
|             | 138<br>139  | ┢        |          | ├─           | ┝            | ┝        | -        |          |  | -                  |
|             | 140   | ┢        |          | $\vdash$     | $\vdash$     |          | $\vdash$ |          |  | Н                  |
| ļ .         | 141   |          | $\vdash$ | <del> </del> | _            | Г        | $\vdash$ |          | _                                      | П                  |
|             | 142   | Г        | $\vdash$ |              |              |          |          |          | _                                      |                    |
|             | 143   |          |          |              |              |          |          |          |  |                    |
|             | 144   |          |          |              |              |          |          |          |  |                    |
|             | 145   | ļ        | _        | _            | L            | L        |          | L        | _                                      |                    |
| <u> </u>    | 146   | <b> </b> | <u> </u> | $\vdash$     | _            | <u> </u> | <u> </u> | <u> </u> | _                                      | $\vdash \vdash$    |
| <u> </u>    | 147<br>148  | ⊢-       |          | $\vdash$     | -            | -        | -        |          | -                                      | $\vdash$           |
| <b></b>     | 148   | -        | -        | $\vdash$     | $\vdash$     | $\vdash$ |          | $\vdash$ | $\vdash$                               |                    |
| <del></del> | 150   | -        | -        | $\vdash$     |              | -        | -        | $\vdash$ | $\vdash$                               | H                  |
|             | 1100  |          |          |              |              |          | ь_       |          | ــــــــــــــــــــــــــــــــــــــ |                    |